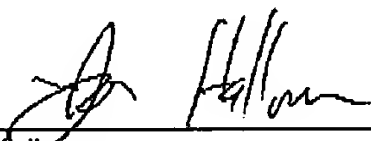
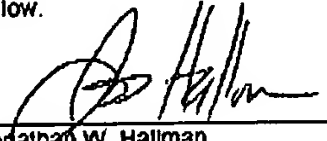


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TRANSMITTAL OF APPEAL REPLY BRIEF			Docket No. M-8745-1P US
In re Application of: Robert D. Freeman			
Application No. 09/815,377	Filing Date March 21, 2001	Examiner Julie A. Watko	Group Art Unit 2653
Invention: TILT FOCUS MECHANISM FOR AN OPTICAL DRIVE (As Amended)			
<u>TO THE COMMISSIONER OF PATENTS:</u>			
Transmitted herewith is a 5 page Reply Brief in this application, with respect to the Examiner's Answer dated <u>July 28, 2006</u> .			
The fee for filing this Reply Brief is <u>\$0.00</u> .			
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 Jonathan W. Hallman Attorney Reg. No. : 42,622 MacPherson Kwok Chen & Heid LLP 1762 Technology Drive, Ste. 226 San Jose, CA 95110 (408) 392-9250 Facsimile: (408) 392-9262		Dated: <u>September 26, 2006</u>	
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I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office, Mail Box: Appeal Brief, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.			
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REPLYM-8745-1P US - APPEAL BRIEF TRANS

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M-8745-1P US
09/815,377

SEP 26 2006

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

First Named Inventor: Robert Freeman

Application No. 09/815,377

Filing Date: 03/21/2001

For: Tilt Focus Mechanism For an Optical Drive

Examiner: Julie Anne Watko

Art Unit: 2653

Attorney Docket No.: M-8745-1P US

APPELLANTS' REPLY BRIEF

M-8745-1P US
09/815,377**Argument**

1). The claimed element "optical pickup unit" has a well-known meaning in the art that has been misconstrued in the Examiner's Answer.

Although the Applicants respectfully admire the zeal shown in maintaining the rejection of the sole claim in this application, that zeal has lead to a strained and non-statutory interpretation of the claim term "optical pick up unit." Indeed, a routine "Google" search on the claim term "optical pick up unit" (OPU) will turn up scores of manufacturers advertising their OPUs as it has a well-known and well-understood meaning in the optical disk drive arts. An instructive tutorial on this term is given by a website having the URL: <http://www.hardwaresecrets.com/article/179/1>. In particular, page 7 of that tutorial shows an exploded view of a conventional OPU, which includes the laser source and the photodiode array required to perform the "pickup" function of an optical pickup unit. The usage of this term varies in that some refer to an OPU may also be denoted as an "optical pickup" or "optical pickup assembly" rather than "optical pick up unit." For example, the cited Alon reference, USP 6,449,225 illustrates an optical pickup 10 in its Figure 1, 3a, 3b, and 3c. As is the case with all OPUs, Alon's optical pickups include a laser source (element 11) as well as a photodiode array (optical sensor 20). More generally, one may peruse the U.S. Patent Office website and see that hundreds of U.S. Patents use this very well-known and understood term. Despite this abundant and well-known usage, the Examiner's Answer has construed the claim term "optical pick up unit" to read merely on the objective lens of the cited Lee reference (USP 6,236,634). Specifically, page 5 of the Examiner's Answer states that lens 1 of Lee "acts to focus a light beam onto an optical disk 5; thus, lens 1 of Lee et al. is an optical pickup unit."

Such a construction is contrary to MPEP § 2111.01, which requires the Examiner to accord a claim term its "plain meaning" given to that term by those of ordinary skill in the art. Even if one is not one of ordinary skill in the disk drive arts, it is abundantly clear that an objective lens performs no "pick up" function whatsoever. Incredibly, however, the Examiner then opines on page 5 of the Examiner's Answer that the Examiner's interpretation of "an objective lens as an optical pickup unit is consistent with common use and understanding of the term by a person of ordinary skill in the art." In what

M-8745-1P US
09/815,377

fashion does an objective lens perform a pickup function? What basis does the Examiner have for such an interpretation? In contrast, the pickup function of an OPU plainly involves the use of optoelectronics such as photodiodes to convert light energy into electrical energy. In that regard, claim 1 does indeed (inherently) recite "electronics in the OPU," contrary to the Examiner's assertion on page 5 of the Examiner's Answer. That would be abundantly clear to anyone of ordinary skill in the art.

Furthermore, the Examiner's Answer has deemed the summary section of the Appeal Brief to be deficient because the Applicants (correctly!) stated that their claimed optical pickup unit includes the "optoelectronics for sending the laser beam into electronic signals carried over flex circuit 84." That is what optical pickup units do: they "pickup" the laser light reflected from an optical disk by converting the reflected light into an electronic signal. It is extremely prejudicial for Applicants to undergo the expense of a full-fledged appeal because the Examiner does not understand what an "optical pickup unit" is – and it not the duty of the Applicants to provide a tutorial in their specification of such well-known terms. For example, the claim term "digital signal processor" has a meaning well known to those of ordinary skill in the signal processing arts. An applicant need not provide a dictionary definition of this term to prevent its being misconstrued by the Examiner to read, for example, upon a single transistor.

As discussed above, the Alon reference indeed does have an "optical pick up unit" mounted on a rotary actuator arm (which may be denoted as an actuator assembly in the context of Applicants' claim 1). But as discussed in the Appeal Brief, that arm is rigid. Thus, to have a focusing mechanism, Alon uses a servo mechanism to move the objective lens in its OPU. In sharp contrast, the claimed actuator assembly includes "a portion pivotally mounted to the remainder of the actuator assembly" and "an optical pick up unit connected to the portion." The portion is "configured to position said first end [of the actuator assembly] along an arcuate path that is substantially perpendicular to the surface of the disk."

The Lee reference adds nothing further to Alon because its OPU is not even discussed: it would include laser source 301 of Figure 10 but no further details are discussed in Lee because Lee was simply directed to an actuator mechanism for holding lens 1 at the proper "flying height" on disk 5. This type of optical disk drive is akin to a

M-8745-1P US
09/815,377

magnetic disk drive, wherein the head rides on a very thin air gap over the disk; hence the term "flying height." Thus, all that the Examiner is pointing to in Lee is simply a means to actuate lens 1 of Figures 10 and 11 at the proper flying height. In that regard, Lee is cumulative to standard OPU practice, which always includes a focus actuation of the objective lens (see, e.g., the Alon reference as discussed above or the web page tutorial).

The misplaced zeal to maintain this improper rejection is also shown in the assertion starting on page 6 of the Examiner's Answer that "even if Applicant somehow convinced the BPAI that specific non-recited opto-electronics were included in the limitation 'optical pick up unit acting to focus a light beam on said optical disk,' there would be no invention in locating known parts, when the functioning of the apparatus is not thereby changed." The Examiner's Answer does not clarify this argument by noting which apparatus is referred to (presumably that of Lee). However, setting aside the plain meaning that "an optical pick up unit" requires opto-electronics to perform the optical pickup function, the Examiner's Answer makes this assertion without even addressing the arguments in Applicants' Appeal Brief, page 6, that plainly show that the functioning of the Lee apparatus is dramatically changed. These arguments are repeated as follows:

As discussed above, one of the innovative features of Applicants' invention is that the optical pickup unit is connected to "a portion pivotally mounted to the remainder of the actuator assembly and configured to position said first end along an arcuate path that is substantially perpendicular to the surface of the disk." In this fashion, as the objective lens within the OPU is moved for focusing purposes, the remainder of the electronics in the OPU moves with it. But note that this is plainly not the case in the Lee reference. Instead, as seen in Figure 10, only the lens 1 is attached to arm 103. The laser and remaining electronics in the "OPU" of Lee is shown as dotted element 301 (Col. 15, lines 65-67). Such a design introduces considerable optical complication because the optical path between Lee's laser source (and the necessary photodetectors) and the lens will change as arm 103 flexes. In sharp contrast, because Applicants' OPU is integrated into the distal portion, the optical path between the lens and the photodetectors never changes during tracking or focusing operations.

It thus follows that there are dramatic and unexpected results provided by the combination of elements recited in Applicants' claim 1 as opposed to the disclosure of the Lee reference.

The misplaced zeal to maintain this rejection is also shown by the rather

M-8745-1P US
09/815,377

ludicrous argument on page 7 of the Examiner's Answer that it "is clear from the specification that it is the location of an objective lens that is critical." The Examiner is obviously reaching here: where is the focus on an objective lens in claim 1? Instead, the Examiner seized upon a statement in the specification (page 5, lines 10-12) relating to miniaturization, which is simply common sense: that by reducing the distance between the objective lens and an optical disk, the resulting disk drive is smaller. But claim 1 does not say anything about miniaturization of an optical disk drive. There is absolutely no basis for the Examiner to somehow construe claim 1 as only relating to a position of an objective lens.

Finally, the misplaced zeal to maintain this improper rejection is also shown by the base reasoning for the obviousness rejection: as stated on 8 of the Examiner's Answer, that basis is "the Examiner has combined the pivotal tracking of Alon with the pivotal focusing of Lee." But that is not what claim 1 recites, the Applicants did not claim "An optical disk drive, wherein there is pivotal tracking and pivotal focusing." Instead, there are specific limitations that are plainly not suggested in the cited prior art. In particular, neither Lee nor Alon provides any suggestion or motivation for "a portion pivotally mounted to the remainder of the actuator assembly" and "an optical pick up unit connected to the portion" wherein the portion is "configured to position said first end [of the actuator assembly] along an arcuate path that is substantially perpendicular to the surface of the disk."

Therefore, in light of the foregoing arguments and the arguments set forth in the Appeal Brief, Applicants respectfully request the Honorable Board of Appeals to reverse the decision of the Examiner with respect to claim 1.

Respectfully submitted,

Date: September 26, 2006

By: 

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